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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,767	02/06/2002	Masahiro Komatsu	Q68403	5814

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EXAMINER	
TRINH, TAN H	

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/066,767	KOMATSU, MASAHIRO	
	Examiner	Art Unit	
	TAN TRINH	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 January 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,5,7,8,10,11,13,14,16,17,19,20 and 27-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *27-38* is/are allowed.

6)☒ Claim(s) *1,2,4,5,7,8,10,11,13,14,16,17,19 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 2-26-2002, 4-23-2004 and 10-15-2004 has been received and placed of record in the file.

2. Claims 27-38 are allowed.

Reasons for allowance

3. The following is an examiner's statement of reasons for allowance:

Regarding independent claims 27 and 36, the references of Shiraki, Sarkar and the prior art of record fail to disclose, the base station which uses uplink transmission power control commands transmitted from the base station via a downlink to control the uplink transmission power of a mobile station in such manner that the uplink receiving state at this base station becomes good: which is characterized by comprising: a receiver for receiving uplink radio signals that have been transmitted via the uplink; an uplink receiving state estimator for estimating the receiving state of the uplink from the received uplink signal; a mobile position recognizer for recognizing the present position of the mobile station from the received uplink signal; a mobile velocity recognizer for recognizing the present rate of movement of the mobile station from the received uplink signal; a mobile position predictor for predicting the future position of the mobile station from its present position and present rate of movement; a database in which the state of the uplink transmission path has been recorded as a function of mobile position; an uplink transmission power control command generator for looking up the database on the basis of the predicted future position of the mobile station, and for generating an uplink

transmission power control command for controlling the uplink transmission power of the mobile station on the basis of (i) the future state of the uplink transmission path obtained as a result of the lookup, and (ii) the aforementioned estimated uplink receiving state; a mixer for outputting the mixed signal obtained by mixing the downlink data with the aforementioned generated uplink transmission power control command; and a transmitter for transmitting the mixed signal as cited in claims 27 and 36.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 4-5 and 13-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Shiraki (U.S. Pub. No. 20020115461).

Regarding claim 1, Shirak teaches a method for controlling the transmission power of a first station in a communication system wherein a radio signal is transmitted from this first station to a second station via a fluctuating transmission path (see figs. 1-4, page 5, sections [0068-0076]): which is characterized by: predicting the future state of this transmission path (see page 5, sections [0076-0086]); and controlling the transmission power of the first station in

accordance with this predicted future transmission path state (see fig. 2, page 1, sections [0007-0013, and page 5, sections [0076-0083] page 6-7, sections [0100-0101]).

Regarding claim 2, Shirak teaches a method for controlling the transmission power of radio signals in a communication system wherein these radio signals are transmitted and received between a first station and a second station via a fluctuating transmission path (see figs. 1-4, page 5, sections [0068-0076]): which is characterized by: predicting the future state of this transmission path (see page 5, sections [0076-0086]); and controlling the transmission power of the radio signals in accordance with this predicted future transmission path state (see fig. 2, page 1, sections [0007-0013, and page 5, sections [0076-0083] page 6-7, sections [0100-0101]).

Regarding claims 4 and 13, Shirak teaches a method for controlling the uplink transmission power of a mobile station in a mobile communication system wherein uplink radio signals are transmitted from this mobile station to a base station via an uplink (see figs. 1-4, page 5, sections [0068-0076]): which is characterized by: predicting the future state of this uplink transmission path (see page 5, sections [0076-0086]); and controlling the uplink transmission power of the mobile station in accordance with this predicted future transmission path state (see fig. 2, page 1, sections [0007-0013, and page 5, sections [0076-0083] page 6-7, sections [0100-0101]).

Regarding claims 5 and 14, Shirak teaches a method for controlling the transmission power of radio signals in a mobile communication system wherein these radio signals are

transmitted and received between a mobile station and a base station via a link (see figs. 1-4, page 5, sections [0068-0076]): which is characterized by: predicting the future state of the transmission path of this link (see page 5, sections [0076-0086]); and controlling the transmission power of the radio signals in accordance with this predicted future transmission path state (see fig. 2, page 1, sections [0007-0013, and page 5, sections [0076-0083] page 6-7, sections [0100-0101]).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 7-8, 10-11, 16-17 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraki (U.S. Pub. No. 20020115461) in view of Sarkar (U.S. Patent No. 6,862,457).

Regarding claims 7-8 and 16-17, Shirak teaches a method for controlling the uplink transmission power of a mobile station in a mobile communication system wherein uplink radio signals are transmitted from this mobile station to a base station via an uplink (see figs. 1-4, page 5, sections [0068-0076]): which is characterized by: predicting the future movement of the mobile station (see fig. 5, page 1, sections [0007-0008]); obtaining the future state of the uplink transmission path corresponding to this predicted future movement of the mobile station and

controlling the uplink transmission power of the mobile station on the basis of the future state of the uplink transmission path that has been obtained (see fig. 5, page 1, sections [0007-0008] and sections [0011-0013]). But Shirak fails to teach predicting the future position of the mobile station and obtaining the future state of the uplink transmission path corresponding to this predicted future position of the mobile station and controlling the uplink transmission power of the mobile station.

However, Sarkar teaches predicting the future position of the mobile station and obtaining the future state of the uplink transmission path corresponding to this predicted future position of the mobile station and controlling the uplink transmission power of the mobile station (see figs. 1-9, col. 3, lines 15-63, col. 7, line 38-col. 8, lines 64 and col. 10, lines 32-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Shirak system and by the providing of the teaching of Sarkar on the mobile velocity and position technique, thereto in order to provide user with the predicts velocity and determination of a average power is made using power control (see col. 10, lines 37-38).

Regarding claims 10-11and 19-20, Shirak teaches a method for controlling the uplink transmission power of a mobile station in a mobile communication system wherein uplink radio signals are transmitted from this mobile station to a base station via an uplink (see figs. 1-4, page 5, sections [0068-0076]): which is characterized by: the mobile station determines the predicted value of fading (see page 6, section [0100]) of the present time position (see page 5, sections [0076-0081]); recognizing the present rate of movement of the mobile station (see page

1, section [0008]); predicting the mobile station from its present position and present rate of movement (see page 1, section [0013]); obtaining the future state of the uplink transmission path corresponding to this predicted of the mobile station; and controlling the uplink transmission power of the mobile station on the basis of this future state of the uplink transmission path that has been obtained (see fig. 5, page 1, sections [0007-0008] and sections [0011-0013]). But Shirak fails to teach predicting the present position to the future position of the mobile station and obtaining the future state of the uplink transmission path corresponding to this predicted future position of the mobile station and controlling the uplink transmission power of the mobile station.

However, Sarkar teaches predicting the present position to the future position of the mobile station and obtaining the future state of the uplink transmission path corresponding to this predicted future position of the mobile station and controlling the uplink transmission power of the mobile station (see figs. 1-9, col. 3, lines 15-63, col. 7, line 38-col. 8, lines 64 and col. 10, lines 32-48).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Shirak system and by the providing of the teaching of Sarkar on the mobile velocity and position technique, thereto in order to provide user with the predicts velocity and determination of a average power is made using power control (see col. 10, lines 37-38).

Conclusion

6. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9314, (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (571) 272-7882.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh
Art Unit 2684
May 31, 2005

NICK CORSARO
PRIMARY EXAMINER